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PATENT  
Attorney Docket 44921-5047-02

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application: **Mark Rabin**

**Divisional** of Application No. 09/697,149

Filed: **October 27, 2000**

**Mutations in the BRCA1 Gene**

Group Art Unit: **1655**

Examiner: **Cynthia Wilder**

**PRELIMINARY AMENDMENT**

**In the claims:**

**Please cancel claims 1-66 without prejudice or disclaimer.**

**Please add claims 67-84 as follows:**

67. An isolated oligonucleotide that specifically hybridizes to a nucleic acid molecule encoding a mutant BRCA1 protein comprising a non-sense mutation selected from Table 3, wherein the mutation results in an in-frame stop codon.

68. An isolated oligonucleotide of claim 67, wherein the non-sense mutation is at any nucleotide position corresponding to positions 127 to 5,708 of SEQ ID NO: 1.

69. An isolated oligonucleotide of claim 68, wherein the non-sense mutation is a thymidine substitution for cytosine at a nucleotide position corresponding to position 4,446 of SEQ ID NO: 1.

70. An isolated oligonucleotide of claim 69 comprising the sequence of SEQ ID NO: 10.

71. An isolated oligonucleotide that specifically hybridizes to a nucleic acid molecule encoding a mutant BRCA1 protein comprising a single nucleotide deletion selected from Table 4, wherein the deletion results in an in-frame stop codon.

72. An isolated oligonucleotide of claim 71, wherein the single nucleotide deletion is at any nucleotide position corresponding to positions 183 to 5,681 of SEQ ID NO: 1.

73. An isolated oligonucleotide that specifically hybridizes to a nucleic acid molecule encoding a mutant BRCA1 protein comprising a double nucleotide deletion selected from Table 5, wherein the deletion results in an in-frame stop codon.

74. An isolated oligonucleotide of claim 73, wherein the double nucleotide deletion is at any nucleotide position corresponding to positions 141 to 5,708 of SEQ ID NO: 1.

75. An isolated oligonucleotide of claim 74, wherein the double nucleotide deletion is at a position corresponding to position 185 of SEQ ID NO: 1.

76. An isolated oligonucleotide of claim 75 comprising the sequence of SEQ ID NO: 4.

77. An isolated oligonucleotide that specifically hybridizes to a nucleic acid molecule encoding a mutant BRCA1 protein comprising a single nucleotide insertion selected from Table 6, wherein the insertion results in an in-frame stop codon.

78. An isolated oligonucleotide of claim 77, wherein the single nucleotide insertion is at any nucleotide position corresponding to positions 144 to 5,708 of SEQ ID NO: 1.

79. An isolated oligonucleotide of claim 78, wherein the single nucleotide insertion is at a position corresponding to position 1,136 of SEQ ID NO: 1.

80. An isolated oligonucleotide of claim 79 comprising the sequence of SEQ ID NO: 6.

81. An isolated oligonucleotide of claim 78, wherein the single nucleotide insertion is at a position corresponding to position 5,383 of SEQ ID NO: 1.

82. An isolated oligonucleotide of claim 81 comprising the sequence of SEQ ID NO: 8.

83. An isolated oligonucleotide that specifically hybridizes to a nucleic acid molecule encoding a mutant BRCA1 protein comprising a double nucleotide insertion selected from Table 7, wherein the insertion results in an in-frame stop codon.

84. An isolated oligonucleotide of claim 83, wherein the double nucleotide insertion is at any nucleotide position corresponding to positions 123 to 5,093 of SEQ ID NO: 1.

**REMARKS**


Written description support for the substitute claims can be throughout the specification and original claims and as set forth in the following table.

Claims	Support in Specification
67-70	Page 5, lines 9-11; page 193, lines 3-5; Table 3; original claims 9-10
71-72	Page 5, lines 9-11; Table 4; original claims 9-10
73-76	Page 5, lines 9-11; page 192, lines 19-21; Table 5; original claims 9-10
77-82	Page 5, lines 9-11; page 192, line 22 to page 193, line 2; Table 6; original claims 9-10
83-84	Page 5, lines 9-11; Table 7; original claims 9-10

If there are any additional fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Dated: **October 22, 2001**  
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Respectfully submitted  
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